Curlyleaf Pondweed in Riley Lake: 2018
(WBIC# 10-0002)
Carver County, MN

Spring Delineation Survey – May 9, 2018

Survey, Analysis, and Reporting by:
James A. Johnson – Aquatic Ecologist, Freshwater Scientific Services, LLC

Prepared for Riley Purgatory Bluff Creek Watershed District – May 2018
Survey & Analysis Methods

Spring Delineation Survey
Freshwater Scientific Services, LLC completed delineation survey for CLP in Riley Lake (#10-0002) on May 9, 2018. During this survey, we navigated a meandering search path over the littoral portion of the lake while using a combination of surface observations, sonar readings, and rake tosses to locate and delineate areas of CLP growth. When we encountered CLP, we marked the location, recorded the water depth, and rated the density of the growth using visual and rake density scores as described in the table below.

<table>
<thead>
<tr>
<th>Score</th>
<th>Visual</th>
<th>Rake</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Light / Solitary plants</td>
<td>1-2 stems</td>
</tr>
<tr>
<td>2</td>
<td>Moderate / Scattered dense patches</td>
<td>3 to 9 stems</td>
</tr>
<tr>
<td>3</td>
<td>Dense / Uniform dense growth</td>
<td>10+ stems</td>
</tr>
</tbody>
</table>

For rake samples, we dragged a sampling rake over approximately 10 square feet of lake bottom and recorded the CLP density based upon the number of plants retrieved on the rake (stem count). The recorded water depths and density scores were linked to the appropriate GPS locations and then mapped using desktop GIS software.
Riley Lake (#10-0002)
Spring Delineation of Curlyleaf Pondweed: May 9, 2018

Map created for Riley Purgatory Bluff Creek Watershed District by:

Map created for Riley Purgatory Bluff Creek Watershed District by:

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Riley Lake (#10-0002)
Spring Delineation of Curlyleaf Pondweed: May 9, 2018

Surveyed: May 9, 2018
Methods: Rake, Sonar, Visual
Surveyor: JA Johnson

Map created for Riley Purgatory Bluff Creek Watershed District by:

fixmylake.com
(651) 336-8696

Curlyleaf Pondweed

<table>
<thead>
<tr>
<th>Plot</th>
<th>Area (acres)</th>
<th>Avg Depth (ft)</th>
<th>Avg CLP Density (0-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>9.5</td>
<td>5.4</td>
<td>1.9</td>
</tr>
<tr>
<td>2</td>
<td>6.2</td>
<td>6.8</td>
<td>1.2</td>
</tr>
</tbody>
</table>
Online Resources & Contacts

Minnesota Administrative Rules for Aquatic Plant Management
https://www.revisor.mn.gov/rules/?id=6280

Minnesota DNR – Aquatic Plant Management Regulations & Permit Application Forms
http://www.dnr.state.mn.us/apm/index.html

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